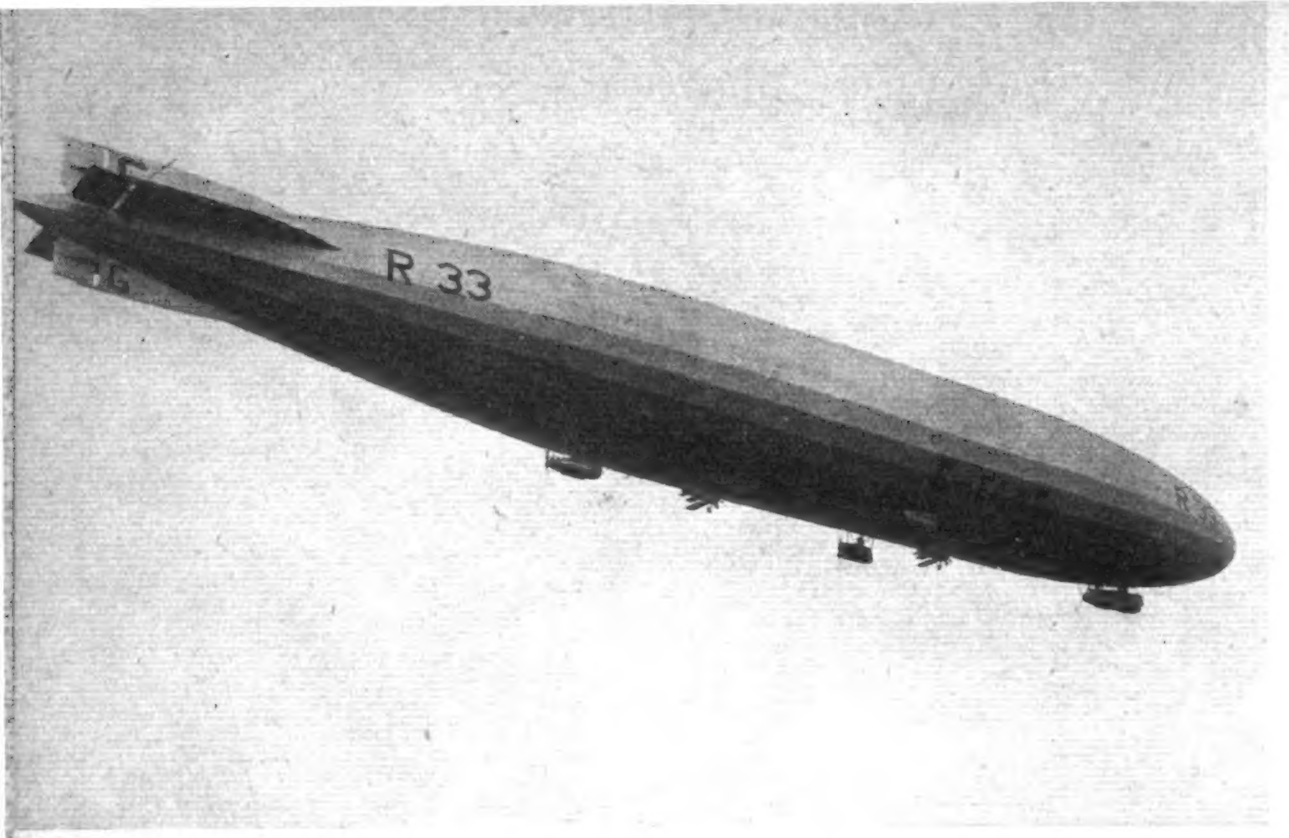

The airship R.33 with her two Gloster Grebes, which were successfully flown-off and re-attached a number of times in 1926
(*Flight* photograph.)

J. V. Hope as second pilot. Two air mechanics were also carried.

The experiment was made in May, 1916, in Felixstowe Harbour. The engine of the Bristol was started just prior to the boat turning into wind and was kept running as slowly as possible by "blipping" the switch. The Porte "Baby" got off the water in about the usual run and slowly climbed. Day then ran his engine full bore, and at a height of under a thousand feet the tail release was slipped. After a slight momentary drop the Bristol climbed slowly away and landed at Martlesham Heath.

The experiment was never repeated—partly, it is believed, due to the fact that with full fuel and military load the addition of the Scout would make the take-off too long, and also to the fact that the slow speed and vulnerability of the craft made it unfit for extended North Sea operation.

In 1921 experiments were carried out in releasing gliders of nine-foot span from the top wing of a D.H.9A. Similar gliders, but of eighteen-foot span and gyroscopically controlled directionally, were at a later date released from Avro Bison, Blackburn and Fairy IIIF. aeroplanes and used as targets for anti-aircraft guns. They were released with excess speed, which caused them to lift clear of the aircraft. After taking up their trimming speed they maintained a steady glide towards their objective. The gyroscope was spun by compressed air and was started just before release of the glider.

Another interesting type of composite aircraft was evolved in the latter part of 1915 by Sqn. Cdr. de Courcy W. P. Ireland, of the Great Yarmouth air station. This officer, who had often been thwarted in his efforts to reach raiding enemy airships, conceived the idea of attaching a B.E.2c aeroplane to an S.S. type non-rigid airship. His idea was that, upon receipt of a warning of an impending raid, the composite aircraft should ascend to the height of the approaching Zeppelins. The airship portion would make a rapid ascent possible and, moreover, the aeroplane need not be released until the Zeppelins came within striking distance, thus conserving fuel and giving a longer endurance.

Wing Cdr. N. F. Usborne, the officer commanding the airship station at Kingsnorth, co-operated in the design and construction of this novel craft.

On February 21, 1916, with Sqn. Cdr. Ireland as pilot and Wing Cdr. Usborne as observer, the airship-plane, as it was called, ascended to carry out the first experimental release. When a height of 4,000 feet had been reached, loss of pressure in the envelope of the airship, and con-

A close-up view of the two Grebes carried by the R.33
(*Flight* photograph.)